



Planetary Health Report Card (Medicine):

University of Vermont
Larner College of Medicine



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of Vermont

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2024-2025 Contributing Team:

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Land acknowledgment:

The campus of the University of Vermont sits within a place of gathering and exchange, shaped by water and stewarded by ongoing generations of Indigenous peoples, in particular the Western Abenaki. Acknowledging the relations between water, land, and people is in harmony with the mission of the university. Acknowledging the serious and significant impacts of our histories on Indigenous peoples and their homelands is a part of the university's ongoing work of teaching, research, and engagement and an essential reminder of our past and our interconnected futures for the many of us gathered on this land. UVM respects the Indigenous knowledge interwoven in this place and commits to uplifting the Indigenous peoples and cultures present on this land and within our community.

Summary of Findings

Overall Grade	B
Curriculum	C
- LCOM does briefly include discussions on planetary health topics in the preclinical curriculum and is actively working to include more. However, it is not until the third-year Global Health bridge week for Vermont campus students and the fourth-year elective course Ecosystem Change and Human Health that specific sessions are held on planetary health. Recommendations: Sessions on planetary health can be delivered in the preclinical curriculum where relevant. Discussions with patients about planetary health could be introduced in clinical skills sessions.	
Interdisciplinary Research	A-
- UVM has researchers who work on planetary health-related projects in LCOM, CNHS, RSENr, CESS, CEMS, the Osher Center for Integrative Health, the Gund Institute for the Environment, the Institute for Agroecology, Food Systems Research Center, and other units across campus. This year, UVM launched a Planetary Health Seed Grant program to fund research projects that include collaborations between health and environmental disciplines. However, participation by LCOM students requires individual initiative. Recommendations: UVM and LCOM should continue to hold conferences pertaining to planetary health. LCOM could also look to better facilitate medical student engagement in these opportunities.	
Community Outreach and Advocacy	B
- Both UVM and the UVM Health Network have community outreach focused on planetary health, but LCOM has no direct engagement. In October 2024, UVM's Osher Center hosted a Planetary Health Summit highlighting current research, teaching, and other work. This year, UVM launched a Planetary Health Initiative website, offering a more centralized location for projects. LCOM works with several community groups but few are directly engaged in planetary health work. Recommendations: LCOM could form long-term partnerships with planetary health-oriented local organizations, the UVM's Office of Sustainability, and UVMHC's Sustainability Council. UVM network facilities could make environmental health education materials more available to patients.	
Support for Student-Led Initiatives	B
- LCOM supports an Environmental Health Student Interest Group and offers a few community-partnered green agriculture activities during medical school orientation. UVM has initiatives, including the Gund Institute, Osher Center, and Planetary Health Initiative that focus on sustainability and planetary health. Recommendations: The medical school could offer increased opportunity to students by establishing a dedicated support structure for students interested in planetary health.	
Campus Sustainability	B+
- UVM prides itself on campus sustainability with a Comprehensive Sustainability Plan, fossil fuel divestment, sustainable building and procurement, compost and recycling, and renewable electricity. The UVMHC now has an Interim Director for Sustainability. However, heating and cooling uses natural gas, access to composting is limited in the medical school, and sustainable transportation lacks incentivization. Recommendations: Creation of unique event and supply guidelines, improvement of incentives for green transportation. Inclusion of LCOM students or faculty in decision-making processes.	

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change “the greatest threat to global health in the 21st century,” many medical school’s institutional priorities do not reflect the urgency of this danger to human health.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients’ health. This preparation is in the hands of the institutions providing our medical training. It is imperative that we hold our institutions accountable for educating medical students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, and 4) community outreach centred on environmental health impacts 5) medical school campus sustainability.

Instructions for Completing the PHRC

Thank you! We are really pleased to have you and your team on board to complete the PHRC at your institution. Many of you will have already been part of a completed report card or even lead the team at your school but please take a moment to read the instructions below.

For a full comprehensive step-by-step guide to completing your report card please refer to the PHRC User Guide. This page serves as a brief overview of the important methodology.

Completing the report card:

The Planetary Health Report Card is a self assessment tool designed to identify an institution's strengths and areas in need of improvement in regards to its planetary health education. The metric-based report card consists of five sections; 1. Curriculum, 2. Interdisciplinary Research, 3. Community Outreach, 4. Support for Student-Led Initiatives and 5. Campus Sustainability.

- **Metrics.** There are roughly 55 metrics (depending on your discipline). Sections 2-5 are the same across all disciplines. Each metric has different criteria for either scoring 1, 2 or 3 points. Participants should read each metric carefully and answer the question with as much accuracy as possible, drawing upon multiple sources where possible. It is vital sufficient investigation is completed for each metric to give a fair and accurate representation of your institution.

Most of the Curriculum metrics are graded by inclusion in **elective** coursework, **brief** coverage in the **core curriculum** or **in depth** coverage in the **core curriculum**.

Elective coursework: This score applies to material that is actively selected by the students such as a module choice, or additional lecture series. By implication, only a given proportion of the cohort will receive this taught material.

Brief coverage in the core curriculum: This score applies where a topic is covered only briefly in a core curriculum session. This implies that the entire cohort receives the same material. Brief inclusion would qualify as inclusion in a single lecture slide in a single year.

In depth coverage in the core curriculum: This score applies where a topic is taught in significant detail or where a topic is repeatedly brought up in different years. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats. Please consider amongst your team that this is the highest score awarded and a subjective decision must be made as to whether the topic should be awarded this score.

(A full list of definitions is provided on the below pages)

- **Types of evidence.** Acceptable forms of evidence include: lecture titles, learning objectives, module descriptions, descriptions of the intended learning, case titles, seminar titles, project titles, webpages, researcher profiles / biographies, news articles, publications, social media output, institutional policy documents. Please be as specific as possible.

It is essential that you have clearly justified the score for each metric, outlining in the box provided the specific content delivered in your curriculum and why you have assigned the

score. Each report card is reviewed by a member of the leadership team for accuracy and consistency across report cards. An example of the sufficient level of evidence is provided below each metric.

Please do not include **lecturers' names** without permission. The title of the lecture or module with a brief description of the material will suffice.

Where material is publicly available via an institution's website, please include hyperlinks to the webpages.

- **Evidence deadline.** Any material from the previous academic year and the current academic year up to the draft deadline of the **17th February 2025** may be included in this report card. Any teaching planned after this date should not be scored in this report card but can be included in the 2025/26 report. You may wish to make a note of any such teaching for your colleagues producing next year's report card.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 1. Describe how the environment and human health interact at different levels.
 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School/Department vs. Institution:** When “Medical school” is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.
- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.
- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

the historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.
- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.
- **Anthropogenic:** Created through human activity
- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Other considerations:

- If there are more than one “tracks” at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

Completed in 2022 a [Literature Review by Metric](#) is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

Section Overview: *This section evaluates the integration of relevant planetary health topics into the medical school curriculum. Today's medical students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that medical students are trained to understand the health effects of these changes, as well as planetary health issues and principles more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.*

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. (1 points)	
No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	2
<i>Score explanation: At the University of Vermont LCOM, FM-1127 "Ecosystem Change and Human Health" is a 4 week elective offered to fourth year medical students. Topics include environmental health, ecosystem change, climate change, biodiversity, and how these intersect with human health, amongst others. Curriculum includes weekly discussion sessions of assigned readings and materials, self-directed learning in a topic of interest, and an associated presentation and project (op-ed, lit review, etc.).</i>	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?
This topic was explored in depth by the core curriculum. (3 points)
This topic was briefly covered in the core curriculum. (2 points)
This topic was covered in elective coursework. (1 point)

This topic was not covered. (0 points)	
Score Assigned:	2
<i>Score explanation: Changes in weather patterns, including extreme heat, are addressed in a lecture on climate change and human health during the third year Global Health bridge week and also discussed in the elective course fourth year course "Ecosystem Change and Human Health."</i>	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	1
<i>Score explanation: The impacts of extreme weather events on human health are covered in a lecture on climate change and human health during the third year Vermont Campus Global Health bridge week and addressed in the elective course fourth year course "Ecosystem Change and Human Health." Topics were briefly mentioned off the slides in respiratory block class.</i>	

1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<i>Score explanation: In the first-year course Attacks and Defenses, several lectures briefly cover the impact of climate change on infectious disease. It is also addressed in direct connection to climate change in the third year Vermont Campus Global Health bridge week and in the "Ecosystem Change and Human Health" elective fourth year course.</i>	

1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

2

Score explanation: The respiratory effects of climate change and air pollution are addressed in the second year "Cardiac, Respiratory, Renal" second year course, specifically with regards to lung disease and cancer; and then also during the third year Global Health bridge week and the elective course fourth year course "Ecosystem Change and Human Health."

1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

1

Score explanation: The cardiovascular health effects of climate change are addressed in the fourth year elective course "Ecosystem Change and Human Health."

1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

1

Score explanation: The mental health effects of climate change were mentioned only in passing in the core curriculum in relation to “eco-anxiety” and increased mental illness burden in refugees of climate disasters (Global Health bridge). However this topic is covered thoroughly in the fourth year elective “Ecosystem Change and Human Health.”

1.8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

2

Score explanation: This theme is covered briefly in multiple core and elective courses in the first year curriculum (A&D, NMGI, and SMTW) including such topics as microbial infections caused by contaminated water, chronic and acute malnutrition, and how human health is impacted by rurality. This topic is also covered during the third year Global Health bridge with a greater emphasis on climate change’s impact, and also in the elective “Ecosystem Change and Human Health” fourth year course.

1.9. Does your medical school curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

1

Score explanation: The disproportionate impact of climate change on certain populations is covered in the third year Vermont campus Global Health bridge week, in elective first and second year sessions (SMTW) on environmental justice, and in the fourth year elective “Ecosystem Change and Human Health.”

1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?

This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<i>Score explanation: The unequal impacts of climate change on a global scale are covered throughout the Global Health bridge week taken in LCOM students' third year. One lecture entitled "Impact of Climate Change on Human Health" specifically discusses malnutrition, safe water, air pollution, and extreme heat and the variable burden and impact of these issues within the US and globally. As part of the lecture, students research individual countries' predominant threats to human health from climate change and compare each country across the class.</i>	

Curriculum: Environmental Health & the Effects of Anthropogenic Toxins on Human Health

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<i>Score explanation: In the first-year Medical Neuroscience course, the "ANS Pharmacology" lecture describes acute poisoning with organophosphates like the pesticide parathion, and links the topic to an optional material (SMTW) on how chronic exposure to chemicals can lead to cognitive, endocrine, and prenatal changes. In the second-year course, Human Development and Reproductive Health, two sessions cover this topic. First, "Teratology" discusses drugs and environmental exposures that can cause developmental abnormalities, including heavy metals, industrial toxins, and agrotoxins. Second, "Where It All Begins: Male and Female Fertility and Where It Can Go Wrong" discusses the many possible causes of infertility which includes information on environmental chemicals that negatively impact fertility including air pollution, pesticides, and heavy metals.</i>	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	

This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<i>Score explanation: The discussion on organophosphate exposure during MedNeuro specifically highlights increased exposure in rural areas, like Vermont. The discussion during A&D on niche expansion of Lyme and Blastomycosis also focuses on Vermont. The SMTW presentation on Rural Health emphasizes how farming and pesticides affect the health of Vermonters and others who live in rural or agricultural areas.</i>	

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	0
<i>Score explanation: At the Larner College of Medicine, the importance and contributions of indigenous knowledge are not discussed in relation to climate change and environmental health.</i>	

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<i>Score explanation: Environmental justice and the disproportionate impact of environmental toxins and climate change on marginalized populations are topics that were briefly covered in multiple courses including PCR1 and 2, multiple SMTWs, and A&D.</i>	

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	0
<i>Score explanation: While numerous first year classes within the “Nutrition, Metabolism, and Gastrointestinal” course emphasized the individual health impact of reducing animal protein and increasing plant-based nutrition, the environmental benefits were not mentioned.</i>	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<i>Score explanation: The carbon footprint of the healthcare system is mentioned in passing during the first year Medical Neuroscience lecture “IV and Inhaled Anesthetics” in the context of the relative greenhouse gas impact of each anesthetic, as well as scavenging in the OR. The contribution of the healthcare industry to a country’s overall carbon footprint was also briefly discussed in the third year Anesthesia and Global Health bridge weeks.</i>	

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	Score
The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment (2 points)	0
The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	0

The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	0
Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	1
The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	0
<i>Score explanation: While there is robust discussion of over-medicalization, over-investigation, and overtreatment in the curriculum through the Choosing Wisely campaign, these discussions do not discuss the environmental benefit. The Med Neuro "IV and Inhaled Anesthetics" class and the third-year Anesthesia Bridge week did touch on the environmental impact of various gasses and the carbon footprint of the OR. Several of these other topics have come up in conversation during the third and fourth years, but are not explicitly part of the curriculum.</i>	

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. (1 points)	
No, there are not strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	1
<i>Score explanation: There is discussion in the elective course "Ecosystem Change and Human Health" about the role of physicians in the climate crisis and a conversation about how to have such conversations with patients.</i>	

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
Yes, the core curriculum includes strategies for taking an environmental history. (2 points)	

Only elective coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does not include strategies for taking an environmental history. (0 points)	
Score Assigned:	0
<i>Score explanation: Students at LCOM are taught how to take a social history with standardized patients that includes standard items such as travel, accommodation, occupation, etc., and important exposures (areas with endemic malaria, city vs alternative water source, asbestos, etc.) to ask about when appropriate are discussed throughout the preclinical and clinical curricula.</i>	

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education. (2 points)	
No, there are no improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
<i>Score explanation: The medical school recently created and filled a new position of Director of Social Medicine. She along with other medical school faculty and students are in the process of creating both a dedicated planetary health module and material to integrate into the existing preclinical curriculum.</i>	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are well integrated into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) . (2 points)	
There is minimal/no education for sustainable healthcare. (0 points)	
Score Assigned:	4
<i>Score explanation: The aforementioned topics are covered throughout the curriculum. While most discussions during the pre-clinical courses are brief, these discussions do happen in courses scattered throughout the first and second years, and are often accompanied by a more focused</i>	

discussion in the student-led Social Medicine Theme of the Week presentations. Some topics are then addressed again during the clerkship “bridge weeks,” especially the Anesthesia bridge week, and the Global Health Bridge week, where a new course on climate effects on health was introduced for the Class of 2025. The elective course “Ecosystem Change and Human Health” is offered in the fourth year. With the exception of the bridge week course and fourth-year elective, most of these discussions are very brief.

1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?

Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)

No, the medical school does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)

Score Assigned:

1

Score explanation: There is a Director of Social Medicine whose role includes incorporating planetary health and sustainable healthcare as a theme throughout the course.

Section Total (39 out of 72)

54%

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Interdisciplinary Research

Section Overview: *This section evaluates the quality and quantity of interdisciplinary planetary health research at the broader institution. Interactions between health and the environment are complex and multifactorial. While climate change has been extensively studied from an environmental science perspective, planetary health is an emerging field. As leading health institutions with talented researchers and research resources, institutions should fund research studying the health effects of climate change and anthropogenic environmental toxins. This obligation is particularly strong because the public and policymakers are more attentive to climate change when its implications for human health are emphasised.*

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?

Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)

Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)

There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)

No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)

Score Assigned:

3

Score explanation: At the University of Vermont, there are several professors in the Gund Institute and Rubenstein School of Environment and Natural Resources with a primary research focus on planetary health and sustainable healthcare. Some of these faculty members have affiliation with LCOM. The Gund Institute for Environment also has fellows and affiliates that work on planetary health, many of whom also have an LCOM affiliation or do collaborative projects with LCOM faculty. There is a lot of public health, environmental epidemiology, and occupational health research within LCOM related to climate change. There is also a large grant being put together on how climate affects health that is being spearheaded within LCOM.

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)

There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)

There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 points)

There is **no** dedicated department or institute. (0 points)

Score Assigned:

3

Score explanation: The Osher Center for Integrative Health (<https://www.uvm.edu/osher/planetary-health>) at the University of Vermont has a newly founded research team focused on environmental health. They are working on building their networks and identifying their research scope. Their current focus is a project investigating health outcomes in patients that receive CSA Farm Share prescriptions. Additionally, the Gund Institute for Environment (<https://www.uvm.edu/gund>) has a strong interest in subjects related to planetary health, but they do not use the term explicitly.

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?

Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)

Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)

No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)

There is **no** process, and **no** efforts to create such a process. (0 points)

Score Assigned:

0

Score explanation: For the Gund Institute for Environment (UVM) to fund anything (via a Gund Catalyst Award), the project must demonstrate links to several research themes, which includes Equity and Environmental Justice. When they added this theme, they partnered with the UVM Provost's Office to offer seed grants earmarked for environmental justice research.

For LCOM, one main conduit for research funding is the Community Engagement and Outreach (CEO) Core within the Northern New England-Clinical and Translational Research Network grant (NNE-CTR). The CEO Core functions to increase research input, access, and participation among individuals, communities, trainees, and investigators across the whole NNE region.

With all this said, communities who may be particularly impacted by environmental change and injustice are not officially included in decision making processes in the medical school, though some individual researchers do incorporate a community based approach to their work.

2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?

There is an easy-to-use, adequately comprehensive website that centralises various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)	
There is a website that attempts to centralise various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The institution has an Office of Sustainability website that includes some resources related to health and the environment. (1 point)	
There is no website. (0 points)	
Score Assigned:	3
<i>Score explanation: UVM recently launched a new Planetary Health Initiative website (https://www.uvm.edu/planetaryhealthinitiative) dedicated to keeping track of past and current projects, as well as sharing about educational initiatives.</i>	

2.5. Has your <u>institution</u> recently hosted a conference or symposium on topics related to planetary health?	
Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)	
Yes, the institution has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the institution has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the institution has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
<i>Score explanation: UVM hosts numerous educational talks and experiences on planetary health and climate change. Some initiatives include:</i> - Sep 23, Oct 7, Oct 21, Nov 4, Nov 11, Dec 2, 2024 Water Resources Seminar hosted by Water Resources Institute - October 17th, 2024 Whole Health for People and Planet, 2024 Planetary Health Summit hosted by the Osher Center for Integrative Health at UVM - Nov 20, 2024 50th Anniversary Symposium hosted by Office of the Vice President for Research, UVM Environmental Program - Jan 6, 2025 The Role of Medicine in Planetary Health hosted by Gund Institute - Jan 21, 2025 Public Talk: From Climate Change Evidence to Action – Accelerating Pathways for Healthy People and a Healthy Planet hosted by Gund Institute - Jan 24, 2025 Public Talk: Nature and Human Health – Flash Talks, Q&A, and Conversations hosted by Gund Institute	

- Sep 20, Oct 11, Oct 18, Nov 1, Nov 8, Nov 15, 2024 Jan 31, Feb 7, 2025 GundxChange Lecture Series hosted by Gund Institute
- Nov 15, 2024 Genomics and Climate Change ft. Dr. Steve Keller hosted by Department of Biology

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?

Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)

No, the institution is **not** a member of such an organisation. (0 points)

Score Assigned:

1

Score explanation: UVM, though its Osher Center is a member of the Planetary Health Alliance (PHA) and the National Academy of Medicine Action Collaborative on Climate and Health. UVM Press is also a member of the PHA. UVM's Gund Institute for Environment has also been a member of the Planetary Health Alliance for several years. The UVM Health Network is a member of Health Care Without Harm and Practice Greenhealth.

Section Total (14 out of 17)

82%

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Community Outreach and Advocacy

Section Overview: *This section evaluates medical school engagement in community outreach and advocacy efforts associated with planetary health. Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.*

3.1. Does your **institution** partner with community organisations to promote planetary and health?

Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)

Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)

The **institution** does not partner with community organisations, but has participating in community focused events relating to planetary health. (1 point)

No, there is **no** such meaningful community partnership. (0 points)

Score Assigned:

3

Score explanation: UVM Larner College of Medicine (LCOM) partners with multiple organizations including the Intervale Center and The Burlington Parks and Recreation Department. Work with the Intervale Center involves students volunteering in maintenance of gardens and the natural environment to include removal of invasive species. Students get an education on sustainable agriculture that is aimed at less industrialized and more sustainable practices. Work with the Burlington Parks and Recreation Department has included park and community garden maintenance.

LCOM also has annual public health projects in which first and second year medical students interface with community organizations to investigate a public health concern. One project in 2022 worked with Give Way to Freedom to look at human trafficking and how climate change increasingly puts people at risk of being trafficked.

Lastly, the Environmental Health Student Interest Group has worked with local organizations including the Vermont Climate Health Alliance to produce educational videos and published editorials in local papers calling for passage of legislation that would improve Vermont's sustainability.

3.2. Does your **institution** offer community-facing courses or events regarding planetary

health?	
The institution offers community-facing courses or events at least once every year. (3 points)	
The institution offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)	
The institution has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	
The institution/medical school have not offered such community-facing courses or events. (0 points)	
Score Assigned:	2
<i>Score explanation: The institution has developed several long term community partners including Champlain Valley Waste District, MapleFest, and Green Mountain Transit, and regularly puts on events including a spring Eco Fair that both students and community members engage in. Additionally, the Osher Collaborative Planetary Health Symposium was a public-facing event hosted in 2024 by UVM. The event was planned in partnership with all 10 Osher Centers. The Collaborative hosts one public symposium each year, but its location rotates each year. UVM's Clamte Kitchen also has a community outreach component.</i>	

3.3. Does your <u>institution</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to some courses . (1 point)	
Students do not receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	1
<i>Score explanation: UVM occasionally sends updates or guidance relating to sustainability. These include encouraging students to carpool instead of driving individually and updates on recycling and composting to reduce waste. At the university level, the tag #thisisplanetaryhealth is used for any news item or event related to Planetary Health. Several articles have been written and posted recently on Planetary Health. However, these are not directly communicated to all students, and this is not specific to LCOM.</i>	

3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?

Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)

Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)

There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:

1

Score explanation:

The UVM Medical Center annual training requirements ensure all employees review environmental concerns, especially in regards to proper waste disposal, with the aim of increasing recycling and minimizing waste. This training is completed via a required online module.

Additionally, several departments including Family Medicine, Pediatrics, and Emergency Medicine have given Grand Rounds presentations that have touched on planetary health and sustainability where these topics interest their fields such as the increasing prevalence of tick borne illnesses, and increases in childhood asthma. Notably the Family Medicine department had a planetary health workshop which included several grand rounds presentations as well as workshops.

This patchwork of presentations offered by various departments that touch on planetary health as it relates to their field though are not required and are infrequently attended by physicians who are less engaged in academic medicine especially those at outlying hospitals.

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?

Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated medical centres have accessible educational materials for patients. (0 points)

Score Assigned:

2

Score explanation:

The UVM Health Network website does offer [extensive materials](#) about how the environment can impact a patient's health and offers steps to mitigate and test for the severity with connections to the Vermont Department of Health Website. There are expanding numbers of UVM Health Network sites and it is not possible to assess if physical education materials are available at all of these sites.

Additionally, the University of Vermont Medical Center has the Frymoyer Community Health Resource Center which is in a physical office in the main hospital in Burlington and is open five days a week. As part of that office there is a subset called the Environmental Health and Safety Office which works to prevent environmentally-caused health issues. Through this center, patients can ask for personalized assistance about medical conditions, injury prevention, and specific ways to reduce or eliminate environmental health exposures.

Although physical brochures and handouts would potentially improve dissemination to patients who have less internet capability, these sorts of printouts are not environmentally sustainable and so putting this information online and helping patients access it is likely the best practice. Having an office dedicated to tackling these issues is a great step and allows patients from outlying areas to call the office and ask for assistance in tackling these issues.

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?

Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned:

1

Score explanation: The UVM Medical Center recently won a Climate Resilience-Gold award for a project aimed at improving health care access by expanding and removing barriers to telehealth. The goal was that more people would have access to care and simultaneously reduce the amount that people would need to drive, thus reducing carbon emissions. As part of this initiative, patients were encouraged to be open to telehealth appointments as a more environmentally friendly alternative when an in person visit wasn't necessary. Patients who can't come to the main hospital can access these services remotely by submitting an email or calling the office to set up an appointment to get their questions answered.

Section Total (10 out of 14)

71%

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Support for Student-Led Planetary Health Initiatives

Section Overview: *This section evaluates institutional support for student-led planetary health initiatives, such as funding, fellowships, programming, and student groups. Planetary health is a young field and, as young people facing a future deeply shaped by climate change, students are often some of the first at an institution to engage with it. Institutions should provide support for students to engage in sustainability quality improvement (QI) initiatives, discover mentors in their area of interest, and receive funding for planetary health projects.*

4.1. Does your **institution** offer support for students interested in enacting a sustainability initiative/QI project?

Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)

The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)

No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)

Score Assigned:

2

Score explanation: UVM has a Sustainable Campus Fund instituted in 2008 which offers financial support for selected sustainability projects from undergraduate and graduate students. The fund has \$230,000 available yearly to fund projects. The UVM Planetary Health Initiative has a planetary health seed grant program that offers funding for projects, though funding is not directly available to students. Additionally, the institution has multiple groups, including the Gund Institute and the Osher Center for Integrative Health comprised of faculty doing work in sustainability.

4.2. Does your **institution** offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?

The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)

There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)

There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)

Score Assigned:

1

Score explanation: Larner College of Medicine students have many avenues available to pursue research in areas of interest. However, there is no dedicated planetary health or sustainable healthcare program or fellowship for medical students. If students are interested, they have

resources, such as specific faculty members who do work in this area, the Gund and Osher institutes, and other general funding sources through the medical school and broader UVM institution.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.

The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:

0

Score explanation: UVM, the Larner College of Medicine, or UVMMC does not have a webpage for locating planetary health or sustainable healthcare projects or mentors. UVM does have a Planetary Health Initiative webpage, but does not include information on projects and mentors within the medical school. UVM's Office of Sustainability does have a webpage, but does not show information about projects or mentors or anything medical school-specific. The UVM medical center offers a landing page on sustainability efforts being made, but it lacks contact information for mentors and is not conducive to facilitating student endeavors..

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?

Yes, there is a student organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)

Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support**. (1 point)

No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:

2

Score explanation: The Environmental Health Student Interest Group is the bastion of planetary health engagement and sustainable healthcare at the Larner College of Medicine. This is a

student-led group with a faculty advisor that is eligible for the same internal funding as all other student interest groups.

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?

Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)

No, there is no such student representative. (0 points)

Score Assigned:

0

Score explanation: This position does not currently exist at the Larner College of Medicine.

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)

Score

Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.

1

Panels, speaker series, or similar events related to planetary health that have students as an intended audience.

1

Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.

0

Cultural arts events, installations or performances related to planetary health that have students as an intended audience.

1

Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.

1

Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)

1

Score explanation: New-student orientation at the Larner College of Medicine includes options for volunteering at the local Intervale Community Farm (a sustainably-operated local agriculture cooperative) and an overnight camping and hiking excursion. The larger UVM institution has a number of programs that focus on agroecology and fishery. They also host speakers and discussions on food systems and climate change. [UVM's Fleming Museum](#) is also very invested in planetary health and has relevant exhibits and activities geared towards students.

Section Total (10 out of 15)

67%

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Campus Sustainability

Section Overview: This section evaluates the support and engagement in sustainability initiatives by the institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.

5.1. Does your <u>institution</u> have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of hospital sustainability. (2 points)	
There are no salaried sustainability staff , but there is a sustainability task force or committee. (1 point)	
There are no staff members or task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
Score explanation: University of Vermont has a robust Office of Sustainability with multiple full-time staff including a director, as well as waste, transportation, and projects managers and student interns. The University of Vermont Medical Center has a Sustainability Council which is made up of multiple hospital employees and serves the hospital, and the UVMHN now has an Interim Director of Sustainability . There is no dedicated personnel for the medical school.	

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?
The institution has a written and approved plan to achieve carbon neutrality by 2030 (5 points)
The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)
The institution has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate (1 point)

The institution/medical school does not meet any of the requirements listed above (0 points)	
Score Assigned:	5
<i>Score explanation: In April, 2023, University of Vermont released an institution-wide "Comprehensive Sustainability Plan," with achieving carbon neutrality by 2030 as a central goal. The plan outlines specific steps for achieving this goal in the areas of Decarbonization, Operations, Governance and People, and Research and Learning.</i>	

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes institution buildings are 100% powered by renewable energy. (3 points)	
Institution buildings source >80% of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source >20% of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source <20% of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	1
<i>Score explanation: Since 2015, UVM has purchased 100% renewable electricity, primarily from hydropower (off-site); this accounts for ~99.9% of UVM's electricity usage with ~0.1% from on-site non-combustion sources. For heating and cooling, UVM utilizes an on-site Central Heating and Cooling District Energy Plant that runs on natural gas and reliably supplies heating, cooling, and hot water. Other sources used include propane and fuel oil. As of 2024, about 29% of UVM's total energy usage was electricity (vs natural gas). The medical school facilities use nearly 100% electricity for energy.</i>	

5.4. Are sustainable building practices utilised for new and old buildings on the <u>institution's</u> campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the majority of old buildings have been retrofitted to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have not been retrofitted . (2 points)	
Sustainable building practices are inadequately or incompletely implemented for new buildings. (1 point)	
Sustainability is not considered in the construction of new buildings. (0 points)	

Score Assigned:	3
<i>Score explanation: The Given Building and the Robert Larner MD Medical Education Center are the primary LCOM teaching and administrative buildings. The Courtyard at Given, where the administrative offices reside is LEED Gold Certified. The “Environmental Design in New and Renovated Buildings” which has been effective since 2011 requires that all new buildings and renovations need to be built in order to comply with LEED Silver Certification. UVM also employs a Retro-Communicating engineer to lead retro-commissioning of older buildings</i>	

5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised. (1 point)	
The institution has not implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	1
<i>Score explanation: UVM students have free access to the local Green Mountain Transit Bus Services as well as the on-campus service (CATS). UVM provides discounted memberships for students to use CarShare, VT. Furthermore, UVM offers bike rentals and repairs for their students. Carpooling is encouraged, and students who order a parking pass must complete an online training module about environmentally conscious transportation. These environmentally friendly transportation methods are not incentivized or widely used across the medical school.</i>	

5.6. Does your <u>institution</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
Yes, the institution has both compost and recycling programs accessible to students and faculty. (2 points)	
The institution has either recycling or compost programs accessible to students and faculty, but not both. (1 point)	
There is no compost or recycling program at the medical school. (0 points)	
Score Assigned:	2

Score explanation: UVM and LCOM have both of these programs, and recycling bins are located in most classrooms and study rooms. Composting is available in all UVM dining locations which include those at the medical school.

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

Yes, the institution has **adequate** sustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)

There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:

3

Score explanation: UVM Dining applies sustainability criteria in its food and beverage purchasing, including requiring 35% of food purchases to be made from Vermont producers or locally-grown/raised food products. Vegetarian and vegan options are offered, however there are no meat-free days or a no-red-meat policy. The Campus Sustainability Plan, which encompasses Sodexo Dining (which includes LCOM dining options), includes the goal of increasing total spending on Vermont grown/raised food to 25% by 2030.

UVM is also a member of the Real Food Challenge which encourages inclusion of local, organic, humanely raised, and/or fair trade foods.

The UVMHN is also committed to [sustainable nutrition practices](#), including partnering with local producers, implementing a sustainable seafood policy, hosting a rooftop garden and bee-keeping, and participating in community-based education and research. The Health Network also established the Center for Nutrition and Healthy Food Systems to educate other healthcare institutions about building a sustainable food service.

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?

Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:	2
<i>Score explanation: UVM has published sustainability criteria to be applied when purchasing chemically-intensive products and services, consumable office products (i.e. encouraging 100% recycled paper goods), IT equipment and tech, food service providers, garments and linens, transportation and fuels, but excluding provided services and furniture. UVM has guidelines in place for purchasing, with some requirements and some general guidelines, including the following language: "UVM is especially interested in products and services that align with its sustainability goals as demonstrated by a Bidder's emphasis on social and/or environmental responsibility. Each Bidder is requested and encouraged to include information in its Proposal about how it will further UVM's relevant sustainability goals. When applicable, Bidders may also be asked to address specific sustainability criteria related to their products and services." The UVM Comprehensive Sustainability Plan also includes the goal of continuing to "improve purchasing practices and increase sustainable purchasing."</i>	

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?	
Every event hosted at the institution must abide by sustainability criteria. (2 points)	
The institution strongly recommends or incentivizes sustainability measures, but they are not required . (1 point)	
There are no sustainability guidelines for institution events. (0 points)	
Score Assigned:	0
<i>Score explanation: There are no sustainability guidelines for medical school events.</i>	

5.10. Does your <u>institution</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has programs and initiatives to assist with making lab spaces more environmentally sustainable. (2 points)	
There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are no efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	1
<i>Score explanation: Development of a program to green campus labs by increasing efficiency of fume hoods and recycling lab supplies is one of the goals of UVM's overarching "Comprehensive Sustainability Plan," additionally, newly-constructed buildings and building renovations at UVM are required to meet at minimum of LEED Silver certification.</i>	

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?			
The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives. (4 points)			
The institution is entirely divested from fossil fuels. (3 points)			
The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments. (2 points)			
The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment. (1 point)			
Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that. (0 points)			
Score Assigned:	4		
<i>Score explanation: UVM divested fully from public investments in fossil fuels by July 2023 and pledged to continue investing in opportunities that focus on sustainability and climate change mitigation. Currently, the UVM Socially Responsible Investing Advisor Council provides recommendations for the Vice President for finance and Administration on Sustainability investments.</i>			
<table border="1"> <tr> <td>Section Total (25 out of 32)</td> <td>78%</td> </tr> </table>		Section Total (25 out of 32)	78%
Section Total (25 out of 32)	78%		

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Grading

Section Overview

This section focuses on the grading of the report card. The institution received a grade for each of the individual sections as well as an overall institutional grade. Section point totals were tallied, divided by the total points available for the section, and converted to a percentage. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics. Letter grades for each section and the institution overall were then assigned according to the table below.

Letter Grade*	Percentage
A	80% - 100%
B	60% - 79%
C	40% - 59%
D	20% - 39%
F	0% - 19%

**Within each grade bracket, a score in the top 5% (_5 to _9%), receives a “+”, and a score in the bottom 5% (_0- _4%) receives a “--”. For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for the Larner College of Medicine at the University of Vermont

The following table presents the individual section grades and overall institutional grade for the Larner College of Medicine at the University of Vermont on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(39/72) \times 100 = 54\%$	C
Interdisciplinary Research (17.5%)	$(14/17) \times 100 = 82\%$	A-
Community Outreach and Advocacy (17.5%)	$(10/14) \times 100 = 71\%$	B
Support for Student-led Planetary Health Initiatives (17.5%)	$(10/15) \times 100 = 67\%$	B
Campus Sustainability (17.5%)	$(23/32) \times 100 = 78\%$	B+
Institutional Grade	$(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = 69\%$	B

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which the Larner College of Medicine at the University of Vermont has participated in the Planetary Health Report Card initiative.

Planetary Health Report Card Trends for University of Vermont Larner College of Medicine

